Engaging Key Populations for Viral Hepatitis Elimination in the United States

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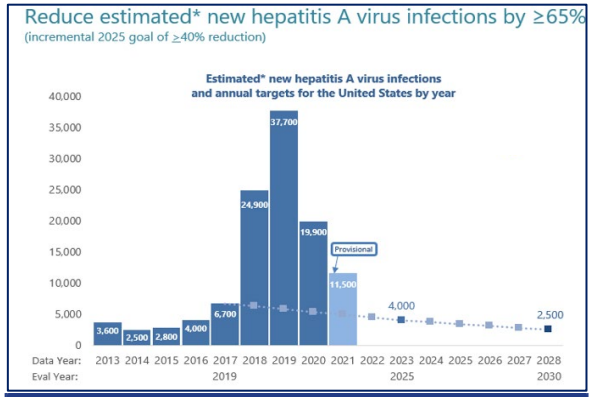
NASTAD Annual Meeting: Federal Partner's Response to Working with Key Populations
May 22, 2023

Objectives

- **Provide an overview of viral hepatitis in the context of injection drug use and other infectious diseases**
- **Describe the rationale and importance of engaging key populations to address syndemic infections**
- **Provide examples of activities centered on key populations (PWID):**
  - National syringe services programs survey pilot *(CDC-RFA-PS19-1909)*
  - Support and strengthen implementation of SSPs *(CDC-RFA-PS22-2208)*
  - Improve access to services for PWID in settings disproportionately affected by drug use *(CDC-RFA-PS21-2103)*

Accelerated Progress Is Needed To Meet National Viral Hepatitis Elimination Goals

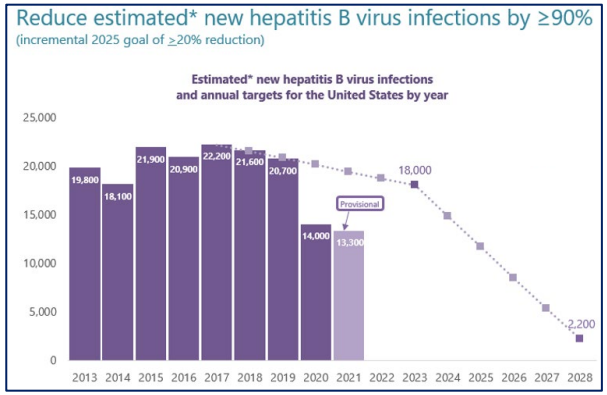
Hepatitis A



National Progress Report 2025 Goal

Status: Moving ***toward*** annual target, but annual target was not fully met

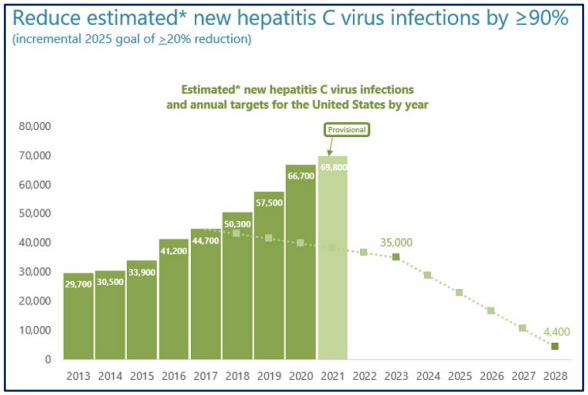
Hepatitis B



National Progress Report 2025 Goal

Status: Met or exceeded current annual target

Hepatitis C

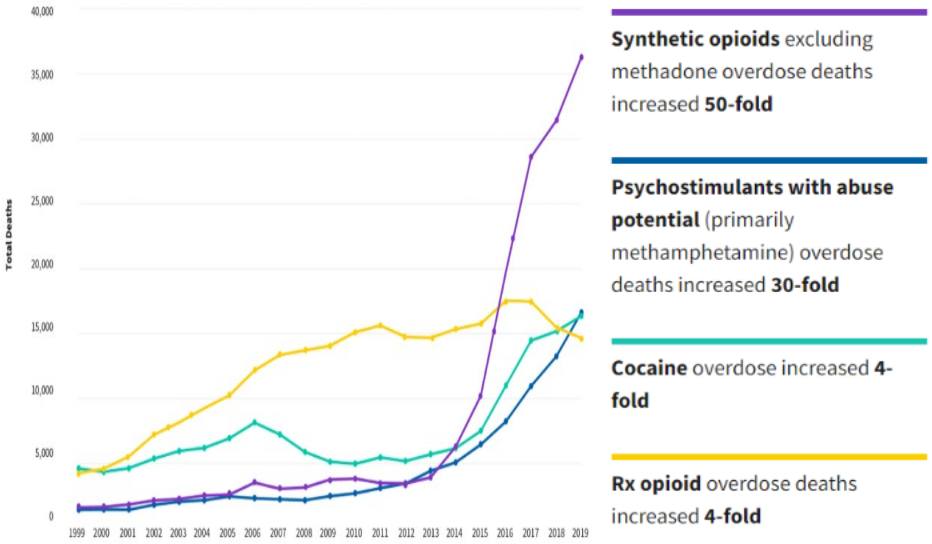


National Progress Report 2025 Goal

Status: Annual target was not met and has not changed or moved ***away*** from annual target

Source: CDC, National Notifiable Diseases Surveillance System. **2021 data are provisional.** The number of estimated viral hepatitis cases was determined by multiplying the number of reported cases by a factor that adjusted for under-ascertainment and under-reporting (Klevens et al, 2014).

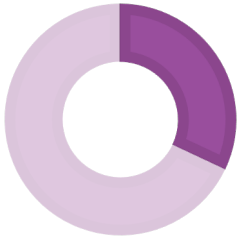
Drug-Related Overdose Deaths Have Soared in Recent Years



Sources: 1. NVSS - Drug Overdose Deaths (cdc.gov); 2. Bradley et al., *Clinical Infectious Diseases*, 2022 ; 3. CDC, National HIV Behavioral Surveillance: Injection Drug Use; HIV Surveillance Special Report 24; Published 2020.

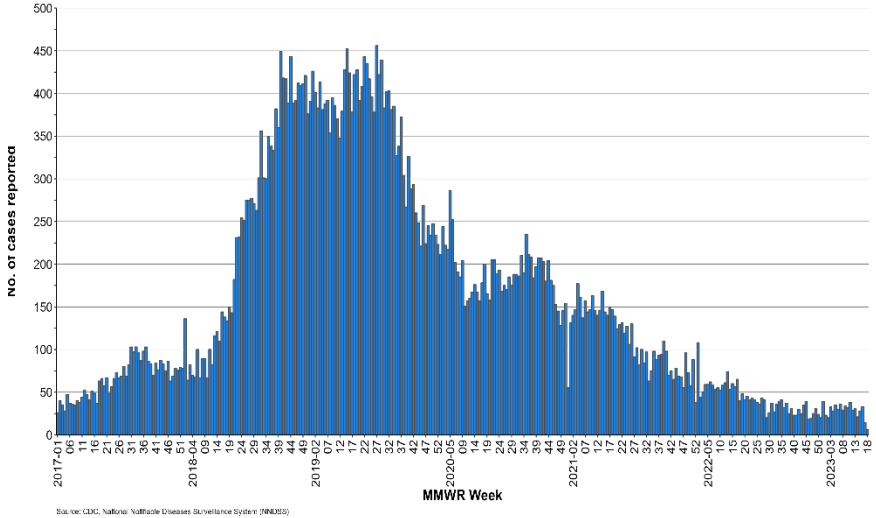
Injection Drug Use Puts Many People at Risk for Viral Hepatitis and Other Infectious Diseases

Estimated **3.7 million people who inject drugs** (PWID) in United States



32% of PWID shared syringes

Persons Affected by Widespread Outbreaks of Hepatitis A



Characteristics among 37,500 cases

(Aug 2016–Dec 2020):

- Any drug use (56%)
  - Injection drug use (38%)
  - Non-injection drug use (35%)
- Homelessness (14%)
- Recent incarceration (12%)
- Hepatitis B coinfection (5%)
- Hepatitis C coinfection (30%)

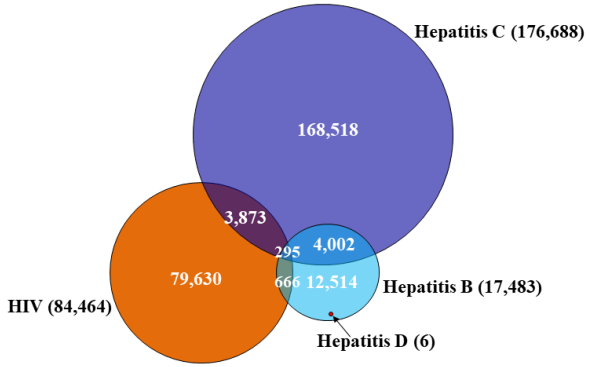
**** High degree of missing data – actual proportions may be much higher!***

Over 60% of cases have been hospitalized

Sources: CDC, National Notifiable Diseases Surveillance System; Data after 2021 are provisional. (2) Foster et al., *MMWR*, 2022

Coinfection with Other Viruses Commonly Found Among Decedents with Hepatitis B Listed as a Cause of Death

Distribution of deaths listed with hepatitis B, hepatitis C, HIV, and hepatitis D – United States, 2010–2019 (n = 269,504)



Among 17,483 (6.5%) hepatitis B-listed deaths:

- **24.6%** (4,297) were with HCV infection
- **5.5%** (961) were with HIV infection
- **1.7%** (295) were with both HCV and HIV infection
- **0.03%** (6) deaths included HDV infection

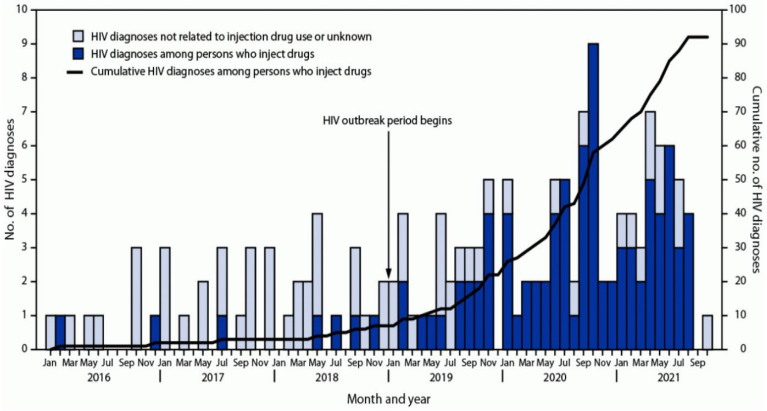
Hepatitis B-listed decedents with HIV, HCV, or HDV coinfection had a younger age at death compared to decedents without coinfection

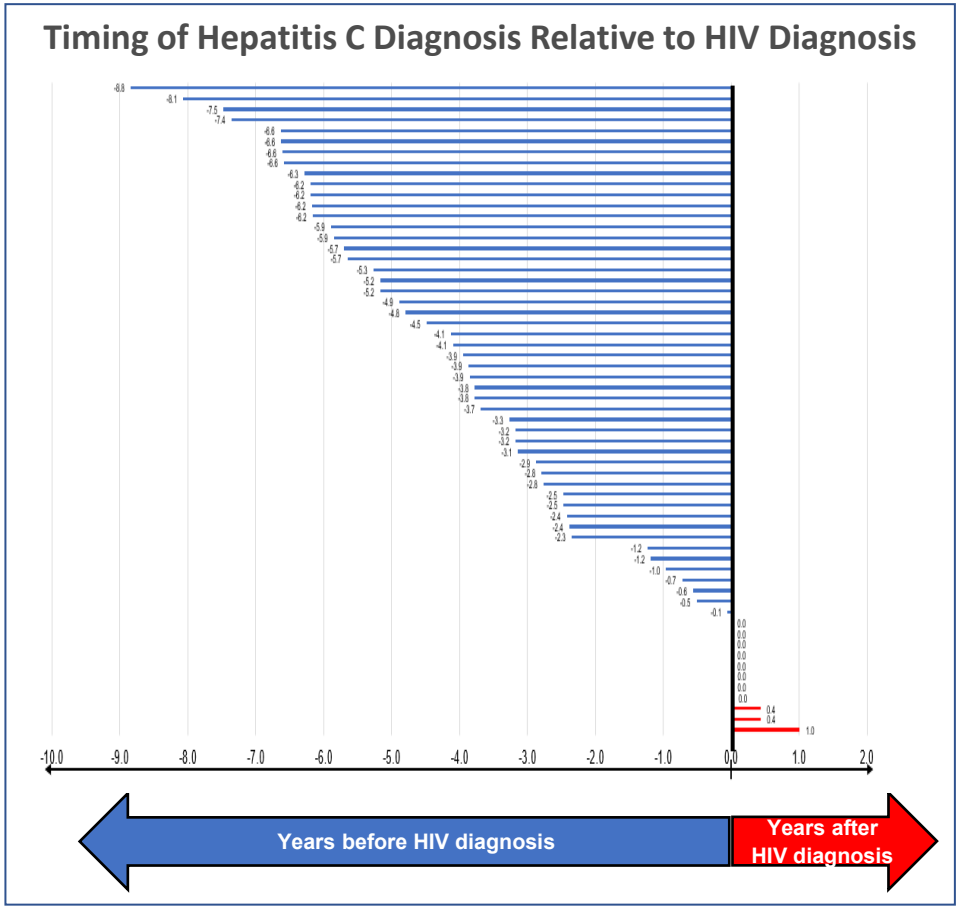
	With Coinfection	Without Coinfection
Age at Death		
0–34 years	2%	2%
34–44 years	7%	7%
45–64 years	**70%**	**48%**
≥65 years	20%	42%

Source: Ly et al, *JAMA Network Open*, 2022.

During an HIV Outbreak Among People Who Inject Drugs in Kanawha County, West Virginia during 2019–2021:

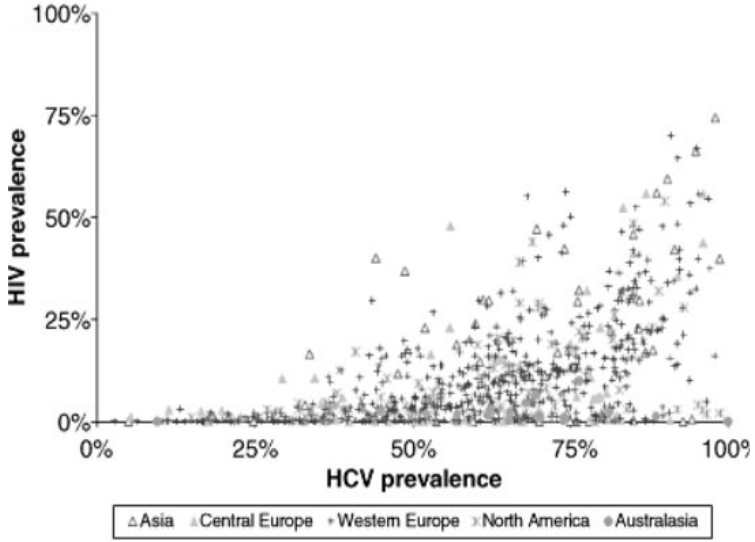
- **86%** of cases had current hepatitis C virus infection
- Hepatitis C diagnosis preceded HIV diagnosis by a median of **46 months** (IQR: 29–71 months)





Sources: Hershow et al., *MMWR;* 2022; Hudson et al., *Clinical Infectious Diseases*, 2023

Strong Positive Relationship Between HCV Prevalence and HIV Prevalence Among People Who Inject Drugs



Vickerman et al. proposed that HCV prevalence could be an indicator of HIV risk among people who inject drugs, beginning at a threshold of approximately 30% HCV prevalence

Sources: Vickerman et al., *Addiction*, 2010

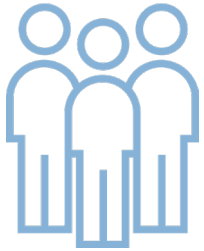
Interventions and Outcomes for PWID

Outcomes / Interventions	Overdose mortality	All-cause mortality	HIV transmission	HCV transmission
MOUD	↓ 59%	↓ 53%	↓ 68%	↓ 74%
Syringe services			↓ 50%	

Sources: Santo et al., *JAMA Psychiatry*, 2021; Johnson et al., *J Infect Dis* 2020; Platt et al., *Cochrane Database Syst Rev,* 2017.

CALL TO ACTION:

Key Actions to Address Syndemics



Put people first

Focus on equity

Put your money where your epidemic is

Leverage policy as a public health tool

Support Workforce & Partnerships

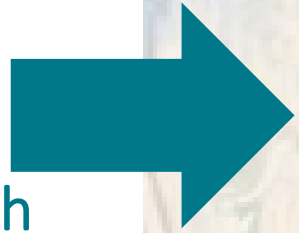
Interventions Centered Around Key Populations

30+ Years of Research Demonstrate SSPs as an Effective Intervention for the Health and Wellness of People Who Use Drugs

Source: Trac B tracbexchange

Strengthening SSPs is Part of a Larger Initiative of CDC to:

- Eliminate injection drug use associated infections
- Reduce substance use disorder and improve health outcomes for people who use drugs



- Increase coverage & capacity of harm reduction programs
- Establish surveillance, monitoring, program implementation

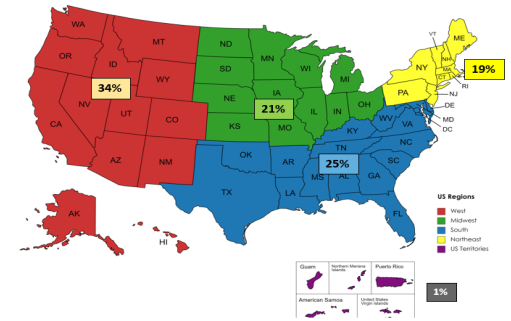
National Syringe Services Programs Survey Pilot (2020-2021)

- **Objectives**
  - **Characterize and show the impact of harm reduction:**
    - Understand where harm reduction services are being offered
    - Assess the trends of the types of services provided by SSPs
    - Measure the impact of SSPs in reducing the adverse health effects of drug use
  - **Identify gaps in harm reduction:**
    - Identify disparities in access to SSPs in places with high burdens of overdose deaths, HCV, HIV
    - Identify gaps in SSP services

- **Survey topics**
  - Program and participant characteristics, services provided, funding resources, syringe collection and distributions, naloxone, community relations and challenges

National SSP Survey: Examples of Valuable Information Learned

Program Characteristics



% of SSPs that operate in urban, suburban, and/or rural areas

- Urban 58%
- Suburban 46%
- Rural 62%

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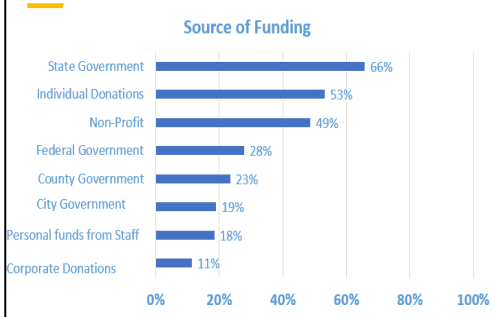
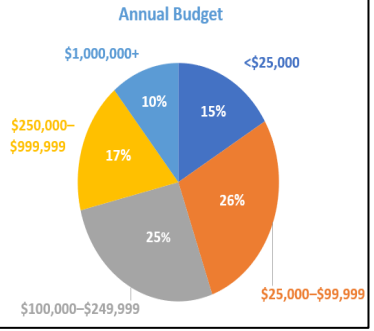
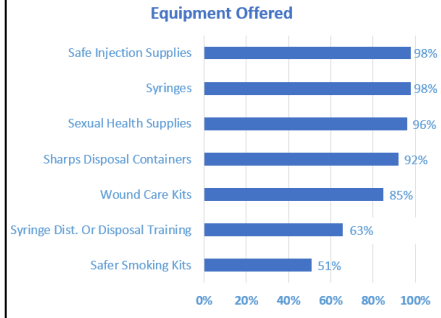
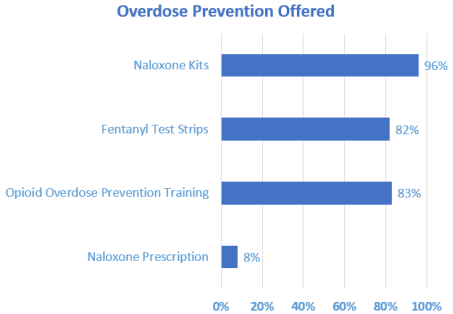
Budget and Funding Characteristics



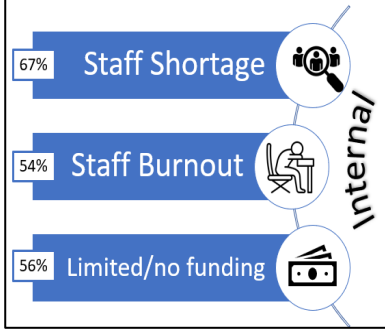


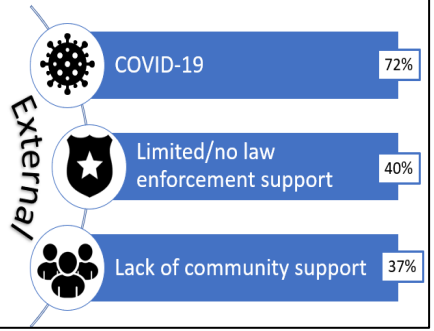
Equipment and Services Offered by SSP Onsite





SSP Challenges Faced





CDC-RFA-PS22-2208: *Strengthening Syringe Services Programs*

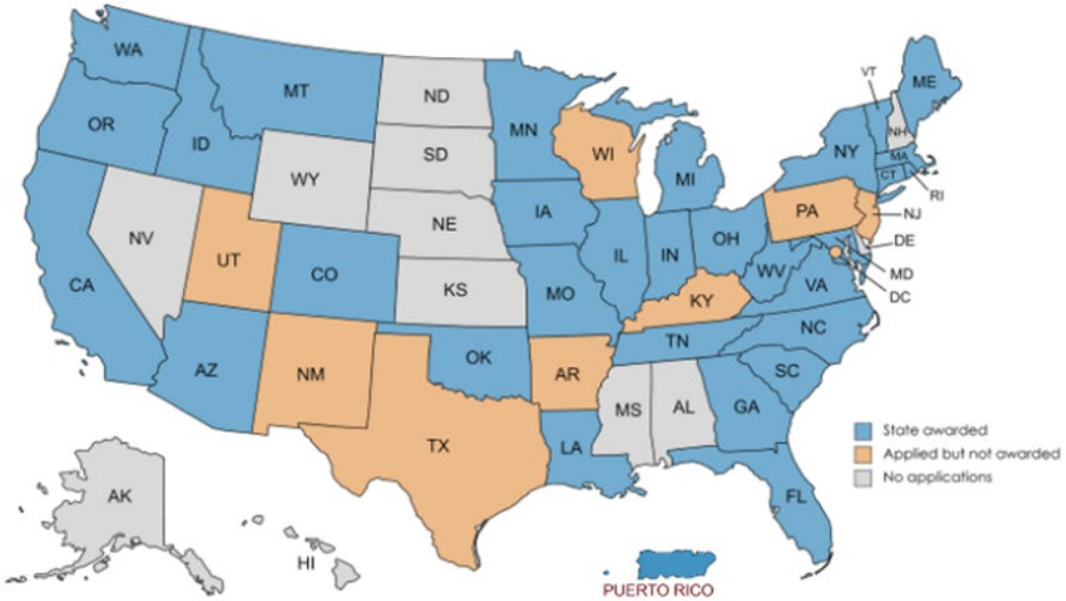
- **Purpose**
  - Increase access to harm reduction services for people who inject drugs (PWID) and reduce incidence of infectious diseases and other complications of injection drug use in the United States
- **Component 1:** Support a **national network** of Syringe Services Programs **(SSPs)** and oversee implementation and use of an **annual survey** of SSPs
- **Component 2:** Support and strengthen **SSP implementation**
  - Applications: 194 completed, representing 41 states, $25M requested
  - Funded: 65 SSPs representing 31 jurisdictions, $6M awarded
    - 55 at $\leq$ $100K
    - 10 at $125K - $150K

CDC's First Dedicated Program to Directly Fund SSPs

(CDC-RFA-PS22-2208)

65 programs across 31 jurisdictions were awarded a total of $6 million

PS22-2208 Component 2



Integrated Viral Hepatitis Surveillance and Prevention Funding for Health Departments (CDC-RFA-PS21-2103)

- **Component 1: Surveillance**
  - Improve surveillance of viral hepatitis, including outbreak detection and control
- **Component 2: Prevention**
  - Increase access to hepatitis testing, prevention, and treatment
- **Component 3: Special Projects**
  - Enhance services to people who inject drugs through outcome-focused activities

By **completing Component 3 projects**, funded jurisdictions will help **improve infectious disease outcomes** for PWID

Strategies

3.1. Improve **access to services** for PWID in settings disproportionately affected by drug use

by

Activities

developing and implementing a **'PWID service bundle'**

in **settings that serve PWID**

e.g., SSPs, SUD treatment providers, hospital settings, correctional facilities

leading to

Outcomes

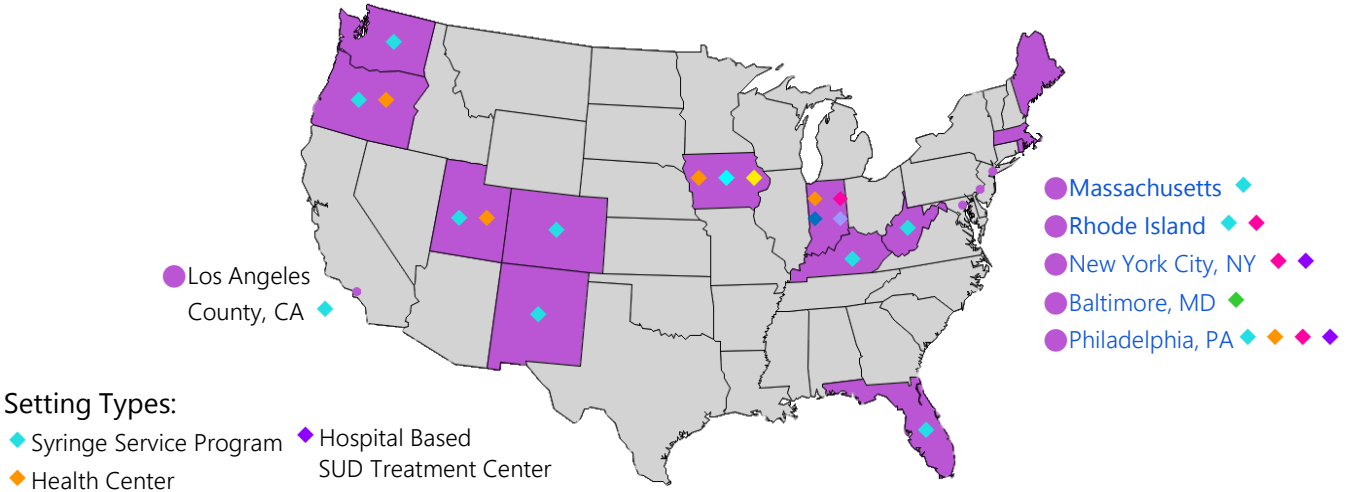
- Increased access to **high-coverage needle-syringe exchange** among PWID
- Increased **linkage to SUD treatment** (including MOUD for PWID with OUD)
- Increased **HCV, HIV, and HBV testing** among PWID
- Increased **hepatitis C cures among PWID** with hepatitis C
- Increased **receipt of hepatitis B and A vaccination** among PWID
- Decreased **new viral hepatitis, HIV and other infections** (e.g., bacterial, fungal) among PWID

Acronyms:

HBV: hepatitis B virus **HCV:** hepatitis C virus **HIV:** human immunodeficiency virus
MOUD: medication for opioid use disorder **SSP:** syringe service program **SUD:** substance use disorder

Twelve States and Five Cities Funded for Projects Focusing on People Who Inject Drugs

PS21-2103 Component 3 Recipients and Setting Types, by Recipient (Year 2)



Note: SUD=Substance Use Disorder. STI=Sexually Transmitted Infections. Maine was a Component 3 recipient but was unable to implement activities in Year 2 due to funding, staffing, and contract challenges.

Conclusions

- Social and structural factors put **people** at risk for *multiple* viral hepatitides and other diseases. This negative interaction can potentially exacerbate the adverse health outcomes of the affected population.

- By **centering** our efforts on key **populations**, rather than pathogens, we can more effectively study the health outcomes and service gaps for populations, provide more **holistic** services, reduce **stigma**, and improve **efficiency** and **cost-effectiveness** of interventions.

- These recent investments in **PWID-centered activities** will provide valuable **lessons learned** on how to best optimize service delivery, inform upstream policy levers, and eliminate health disparities.

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THANK YOU!!

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